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ABSTRACT

A case study of curricular change compares two leading models of organizational change. One model stresses the uncertainty and disorder of major changes and views them as dramatic events. The other model sees major organizational shifts as the result of ordinary day-to-day processes and emphasizes their routine nature. For this study, the researchers analyzed the introduction of microcomputers into the classroom in one school district in an upper-middle-class Chicago suburb. Data for the case study were gathered through interviews, observation of administrative meetings, and content analysis of documents and speeches, using a method developed by political scientist Robert Axelrod. Microcomputers, seen by the superintendent as a major curricular change, were successfully introduced in the district without upheaval or drama. The researchers identify two methods by which the superintendent achieved this. First, routine administrative meetings over several years, at which the microcomputers were discussed, accustomed the principals, staff, and board members to their use. Second, the superintendent in his speeches and writings tied the microcomputers to audiovisual techniques, skill acquisition, literacy, and other familiar educational concepts. The authors suggest that such orderly, routine organizational changes should be studied more often. (Author/RW)

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Drama and Routine in the Public Schools[1]

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Abstract

It has become fashionable to describe major change in organizations, especially in educational organizations, as influenced more by chance than by design, as more disorderly than routine. The research reported in this paper began with the preconception that uncertainty and the need to discover new "framing" concepts would most frequently face school decision makers who tried to introduce such change. The first such decision investigated in depth, an issue that dominated the attention of top level administrators for one and a half years, did not, however, follow these preconceptions. Instead, a major decision passed quietly through a set of established procedures, rhetorically de-emphasized as a major event. Two explanations are offered for the achievement of this smoothly orchestrated decision. First, a set of well-known procedures or "administrative mechanisms" were available. Second, the superintendent had gradually developed a continuing way of relating the key concepts involved to other curriculum concepts. We suggest not only that "orderly" changes of this sort have been under-attended in recent years, but that the ultimate challenge to even the most dramatic change effort is to achieve just what is exhibited in this case history--the transformation of the new into the unexceptionable.

Most organizations at one time or another make important, even dramatic, changes in their operation. They change their clientele; they alter their mix of products or services; they adopt radically new technologies of production or distribution; they merge with other organizations; they divest themselves of long-held property or programs; they reject an existing ideology and develop a new self-concept; they move to a new geographical location thousands of miles away.

The explanation of how change of this sort takes place has recently focused on surprise and uncertainty. This explanation asserts that fundamental change must be produced by charismatic, ideological, and frequently disorderly processes. It asserts a discontinuity between the processes of day-to-day maintenance of the existing organization and processes that produce long run modifications of the organization. An extended statement of this view was contained in the research proposal to NIE which initiated this research:

> Administration within a given domain presumes the existence of reasonably well-understood objectives and reasonably well-developed procedures and means for carrying out those objectives. Efficient operation under these conditions of low ambiguity requires careful control and coordination of multiple interdependent activities. Students, teachers, courses and classrooms must be scheduled to maximize coordination and utilization. Course content must be controlled to assure requisite coverage of material. Efficient operation implies the development and use of routine procedures on a repetitive basis. Doubt about the appropriateness of action is to be suppressed.
>
> How to manage within a given domain, under conditions of certainty, is implanted in textbooks and taught in courses on administration. But those same techniques of management are ill-suited to the task of changing domains, when objectives are ambiguous or in dispute and the consequences of actions are unknown or poorly understood. [Emphasis added]

> Indeed, management under conditions of ambiguity is not well studied, developed, or understood. Thompson (1967) argued that under such conditions, decisions are made by "inspiration," that is, by the unarticulated insights of a charismatic leader. March and Olsen (1976) described such decision processes as the random intermixing of problems, solutions, issues, and decision makers in decision situations described as "garbage cans." Weick (1979) proposes a model of learning under conditions of such high equivocality or uncertainty as a process of evolutionary drift driven by random enactment and selective attention under the loose control of only partially consistent retentions from previous experience. Meyer and Rowan (1977) observe that there will always be a contradiction between the systems for operating efficiently within the existing domain (created to be in tune with some environment) and the rationales created for interfacing legitimately within some new environment. Whereas administration for current efficiency is characterized by nearly complete knowledge, consistency and acceptance of the status quo, administration for future domains is characterized by ignorance, inconsistency, and rejection of the status quo.

There is, however, a counter explanation of change. Fundamental shifts in the organization, in this view, result from the ordinary workings of day-to-day processes. Significant shifts, in fact, are frequently not discovered to be fundamental until after they have taken place. Continuity with the past and adherence to routine are the expected state of affairs. In contraposition to dramatic explanations, there is rarely significant difference between the mechanisms of day-to-day adaptation and major adaptation.

This account of organizational change is well illustrated in the recent writing of James March (1980):

> Most change in organizations is the result neither of extraordinary organizational processes or forces, nor of uncommon imagination, persistence or skill. It is the result of relatively stable processes that relate organizations to their environments. It occurs because most of the time most people in an organization

> do approximately what they are supposed to do, and what they are supposed to do is to be intelligently attentive to their environments. Bureaucratic organizations are not always efficient. They can be exceptionally obtuse. But most of the organizations we study exhibit an impressively decentralized capability for changing as a matter of routine. ...Within such a concept of change in organizations, drama in organizational events is produced not be dramatic efforts but by elementary processes. The same processes that sustain the dull day-to-day activities of an organization produce the unusual events. Organizations change easily and continually; and the effectiveness of an organization in responding to its environment is linked tightly to the effectiveness of its routine processes.

With our initial focus on change as a process that requires special management procedures thus challenged, we can now sharpen the question to which this paper is addressed: How can we better account for both drama and routine in the decisions which are important to organizations?

The Research Program

Over the past two years, we have been studying the process of "issue management" in three Chicago area school districts. We have labeled as our issues any set of concerns which top level administrators identify as both important to the long run nature of the district and occupying considerable organizational effort. We have been following the course of several such issues in each district, including two potential school closings, extension of a foreign language training program in the elementary grades, merger with a regional vocational training center, abandonment of student self-scheduling in a high school, reorganization of the administrative structure of a junior high school, and the purchase of microcomputers for use in elementary classroom instruction.

The overall objectives of this work has been to broaden the focus of most research on decision-making by simultaneously considering a) the contribution of multiple actions to decision-making, b) the simultaneous existence and potential interaction of many different issues requiring decision-makers' attention, and c) the changing nature of "what's at issue" as the decision context itself evolves over time. Our unit of analysis has been the issue itself and we are constructing a descriptive case history for each issue studied. Data have been collected by a variety of methods: interviews with key participants; observation at meetings of administrative staffs, Board of Education, and public open houses; examination of minutes, reports, speeches, news releases, and other written documents. All interviews and some meetings have been tape recorded and transcribed. Relevant stories in the local newspapers have been summarized. All data are being coded and entered into computer storage for key word retrieval. We have jointly conducted almost all of this data gathering so that we have two sets of observer notes to compare. We also try to compare and tape our impressions immediately following contact with one of our sites.[2]

Our analytical strategy assumes that each issue may have important idiosyncratic features. Therefore, we are attempting to develop a "theory" for <u>each</u> issue without forcing premature uniformity across issues. These are more than case studies or ad hoc explanations; but they are something different than single instances of a standard comparative model. We wish to remain open to the possibility that different issues are managed differently, even in the same district. We work on the presumption that something of general, abstract, theoretical

significance can be learned from the analysis of even a single issue (although more will assuredly be learned from studying several issues across several districts).

This paper illustrates our analytical strategy by selecting a single issue, describing its life course, analyzing the processes used to manage its development, and charting the changes in substantive emphasis which occur over time. The theoretical frame within which this analysis takes place involves the contribution of drama and routine to deliberate attempts to change organizations. Our curiosity has been piqued by the number of issues that do not overtly follow the path of upheaval.

The Site and its Repetoire of Administrative Mechanisms

Shady Grove,* Illinois is an upper middle class suburb of Chicago, populated by families whose breadwinners tend to be employed in management and the professions. It is politically conservative, and strongly supported Reagan in the 1980 Presidential election. Community members place a high value on education, and take as their educational reference group other elite metropolitan suburbs from across the country, such as Scarsdale and Palo Alto. School administrators pride themselves on being educational leaders rather than followers, with an emphasis on excellence, innovation, individualized instruction, and strength in basic education. Candidates for public office, including school board members, are selected by an informal caucus of community leaders, and typically run unopposed.

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*Pseudonyms are used throughout, and facts are altered slightly to preserve anonymity of the district.

The school system is organized into an elementary district (K-8) and a legally separate high school district. Each district has its own seven member Board of Education elected to rotating four year terms. We are studying the elementary district.

Robert Sampson received his Ed.D in the early 1960's and has been Superintendent of the Shady Grove Elementary School District for about ten years. His central administrative staff consists of an Assistant Superintendent, a Business Manager, a public relations officer, a school psychologist, a building and grounds supervisor, and various clerical personnel, all housed in the same administrative office building.

The district consists of six elementary schools and the junior high. Enrollment has dropped 24% percent since 1973-74 to its present 1980-81 level of about 2100 students. The pupil-to-teacher ratio is about 21 to 1. Staff reductions paralleled the enrollment decline and certain programs were phased out during the 1970's, so that the district is currently in good financial condition. Vacant classroom space has been rented out to a local junior college and other non-profit community organizations. To date, no neighborhood schools have been closed.

A variety of regularly scheduled group meetings comprise the administrative apparatus of the distict:

1. The Superintendent meets weekly with the Assistant Superintendent, the Business Manager, and the public relations officer in an "administrative staff meeting." Usually one of the building principals attends this meeting.

2. The entire central administrative staff meets once per month with all the building principals in the "principals' meeting."

3. At one additional meeting per month, this same administrative group is joined by the "teacher-administrators" (one person per building, each devoting 25% time to administration) in an "all administrative staff meeting."

4. The Board of Education meets once per month in its "regular meeting," at which official business is transacted.

5. The Board also meets the week before the regular meeting in its "curriculum meeting" to review the district's various programs and to discuss proposals for programmatic change. No official votes are taken at this meeting. The "curriculum meeting" of the Board is a long standing tradition in Shady Grove, having functioned continually for 30 years. It is perhaps the districts' most distinctive administrative characteristic and can play a key role, as shall be seen, in strategic decision making. The agenda of the "curriculum meeting" is planned several months in advance by the Assistant Superintendent.

6. The Board sometimes meets immediately after its regular meeting in "executive session" to discuss sensitive matters relating to personnel and property management.

7. Once per year, typically in the fall, the Board takes a "Board tour" of the physical facilities to inspect repair work and the general condition of buildings, classrooms, and other facilities.

8. The "budget committee" and when necessary the "negotiating committee" of the Board meets between regular meetings of the Board to conduct committee business.

9. In most years, the Board and the central administrative staff conduct "open forums" with the PTA organization in each school in the

district. The Superintendent may also meet 2-3 additional times per year with the district-wide PTA group on special topics.

10. In special cases the Board will appoint a "blue ribbon committee" from the community to study and make recommendations regarding some problem or program in the district.

Together these regular meetings provide more than one hundred occasions per year when the Superintendent can discuss affairs of the district with his immediate staff, building administrators, the Board, parents and the public. This administrative apparatus constitutes a complex information processing and decision-making network that operates according to a more or less predictable routine, supplimented by the innumerable other less formal contacts and group meetings that go on.

A crucial question for the research is how this set of formal administrative mechanisms is used to bring about changes in the district. The "routine model" argues that even major change takes place via the formal administrative process; the "dramatic model" argues that major change is more likely to take place outside the normal bounds of this set of mechanisms, or distorts its routine functioning. These alternatives are examined in the context of a recently made decision to purchase microcomputers for classroom instruction.

The Issue: Microcomputers in the Classroom

In February 1980, at its monthly regular meeting, the School Board of Shady Grove voted unanimously to spend $25,000 to buy ten Apple II Plus microcomputers for use in classroom instruction. The decision was made on the recommendation of a blue ribbon committee of computer experts drawn from the community, which had begun work on the problem

seven months earlier. In the charge to the committee, the Superintendent provided a prioritized list of objectives that he hoped the committee would attempt to achieve in making a recommendation on computer usage, which included the suggestions that:

- students would become "literate" enough to use computer technology in everyday living
- students would master basic course material through the use of the computer
- teachers would be able to track student progress and provide student options via the computer
- the computer would be available for drill and tutorials to meet individual student needs.

These first level priorities were followed by suggestions that the computer should also be available for testing research, data storage, and simulations, and that students should have "the opportunity to learn the BASIC computer programming language."

This list of objectives proposed a fundamental change in the school district curriculum in the eyes of the superintendent. Computer technology was to be introduced into the curriculum as a topic in its own right. But the computer was also seen as a more general teaching device for "all students" in "all areas of the curriculum," as an administrative device for management of instruction, as a device for research, as a mechanism for storing instructional programs, and as a way of developing "basic skills." Computers thus described would impact the activities of both students and teachers. This is an innovation, in short, with the potential for pervasive impact on the school system's pedagogy and curriculum.

It is difficult to pinpoint exactly when the district began to consider the possibility of buying microcomputers for instructional use. The first time the topic appeared on any formal agenda of the Board of Education was at the May 1979 Curriculum Meeting, under a discussion topic headed "Technology in Education." The topic had been announced to the Board at its prior regular meeting in April. At the May Curriculum Meeting six reprinted articles were distributed on various aspects of personal computing and computer assisted instruction, the earliest being dated July 1977. A seven page handout was also prepared and presented by the staff, (the Superintendent, the Business Manager, one of the elementary school principals and the Director of Audio Visual Instruction). This handout began by asserting that "[t]he computer is the ultimate audio-visual machine," [emphasis added] an early sign that the computer issue would be linked closely with a familiar technology while its novelty was deemphasized. The handout went on to stress the need to develop "computer awareness" in grades K-3, and "computer literacy" in grades 4-8. Possible uses, available texts, films, and reference works were listed.

At the regular meeting of the Board in June, a unanimous vote was taken to create a "Committee to Review Computer Technology." Prior to the meeting, the superintendent had already secured an agreement to serve on such a committee from three community members with computer expertise. They were asked to select two additional members, and given the charge "to review Computer Technology and investigate possibilities for its future in the District."

No further mention was made of the project at the July Curriculum Meeting, despite the presence of the agenda of an extensive discussion of the mathematics program, including the desirability of using hand held calculators in mathematics courses, an issue that was at least peripherally related to computers. However, at the July regular meeting of the Board, the full composition of the "Committee to Review Computer Technology" was announced as were its plans to hold its first meeting two days later.

From that date until the January 1980 curriculum meeting, six months later, when the committee presented its findings and recommendations to the Board, only occasional mentions of its continuing progress were made at regular Board Meetings. For example, in the September, 1979 minutes, the Superintendent reported that "The Committee on Computer Futures" (note the subtle change in committee designation from "Committee to Review Computer Technology") continues to meet twice a month." The committee submitted its report at the January 1980 Curriculum Meeting. The report was formally accepted at the February 1980 Curriculum Meeting, and at the February regular meeting, the decision to appropriate $25,000 to buy ten microcomputers was officially taken.

Despite the statement of far-reaching objectives, the potential impact of the decision to invest in the microcomputers was only mildly noted by the Board. In the minutes of the February Board meeting, it was reported that "President Alexander said he had no quarrel with the expenditure [of $25,000]; however, this is a substantive change in the curriculum and he wondered if the Board had spent enough time talking

about it, adding that it was not only dollars and cents but an important commitment." After "further extensive discussion," the Board voted approval of the expenditure, and went on to the next agenda item, approval of the recommendations of the textbook selection committee.

Broader publication of the microcomputer decision was similarly low-keyed. The district publishes a short newsletter four to six times per year for distribution to all community leaders. In the March/April 1980 issue, a 3/4 page story announcing the microcomputer decision was printed on an inside page. The story related the thoroughness and breadth of consultation of the decision process and the goals of the program. However, it concluded on a conservative note with Superintendent Sampson stressing the program's continuity with long-standing values and policies:

> District X is committed to instruction in the basic skills...making our students literate through heavy emphasis on reading, writing, listening, speaking, mathematics, social studies, science, foreign language and the arts. In this context, it is incumbent upon our district to make students literate in the 1980's version of our basic skills - computer language.

Thus was a potentially major change in curriculum pictured merely as a natural extension of the district's commitment to "basic skills." There is every indication that this is an innovation that will "take" in the district. By April of the first year 400 of 600 junior high students had taken a basic course familiarizing them with computer operation. Many students in other grades had also been involved. In-service teacher training had been carefully orchestrated to "tune" key teachers into involvement, including the head of the teachers union. Fifteen teachers and learning center directors chaired by the Jr. High

School Principal, have been appointed to a committee to implement and monitor the program. As of March 12, 1981, the committee had met five times, most recently with two members of the original blue ribbon committee to discuss problems with implementation, including the need for more computers. One aim of the committee is to develop a proposed two-year extension of the program, including the purchase of twenty five more microcomputers, in 1981, which will be presented to the Board at its May 1981 curriculum meeting.

Management of the Computer Issue

The above description of the process of managing the microcomputer issue is as incomplete in several important respects. Many process details that occurred in the various stages of decision making have been excluded, including various astute "political" moves to gain supporters. In addition, an important precursor to the 1980 decision can be found in the 1976 authorization of $10,000 by the Board to carry out a pilot test of the instructional uses of computer terminals linked to a remote main frame computer then used by the district's business office. Although the results of that pilot test were negative, it did acquaint members of the district with the educational possibilities of computer technology, and helped identify teachers who were particularly interested in computer technology.

Despite such gaps in the presentation, we have been able to document in detail many of the events leading up to and following the crucial February 1980 Board decision. The following features seem most noteworthy in this chronicle:

1. For this particular issue in this particular district, issue management is better described by the routine perspective identified at the beginning of this paper than by the dramatic perspective. There is heavy reliance on the use of existing and familiar administrative mechanisms activated in familiar ways. The change itself is framed as an extension rather than as a sharp break with current values and policies. Jim March's recent views on routine-driven change, rather than our own initial focus, better describe the data. Routine definitely triumphed over drama.

2. Proper choice of language helped frame the decision as ordinary and routine, downplaying potential discontinuity with past practice. Prime examples include describing the computer as an "audio-visual device," computer knowledge as a "basic skill," the educational objective as computer "literacy," and the opportunity to learn a programming language on "teaching the computer."

3. At least five distinct administrative mechanisms were used during the decision process. (1) the monthly regular meeting of the Board of Education, (2) the monthly "curriculum meeting" of the Board, (3) the blue ribbon committee of computer experts drawn from the community, (4) the weekly administrative staff meeting and (5) the in-house committee of teachers and learning center directors. These mechanisms might be thought of as the empty containers into which issues such as the computer issue are poured. They are stable parts of the administrative structure ready to be called into being or "attached" (Sproull, 1980) to some specific issue. Each mechanism appears to have a routine

way of operating, and each is a general routine (or operator) in that it can be applied to the processing of a wide variety of problems.

Such administrative mechanisms are well-suited to carrying out some tasks and poorly suited to carrying out others. For example, the curriculum meeting of the Board seems ideally suited to a general overview and assessment of a situation, but (at least in this case) was poorly fit for creating and evaluating solutions to the problem at hand, or even for defining the problem in the most fruitful way. The regular meeting of the Board served the function of publicly taking and displaying decisions to create committees, approve findings and commit funds. Strung together, these mechanisms comprise a long sequence of information processing routines that constitute the observable artifacts and vehicles of an issue management strategy.

4. Each of the administrative mechanisms served not only to advance the decision process but also to link key sets of participants: computer experts to the Board, the administrators to the teaching staff, the district to the public. The sequence of mechanisms can be seen as creating a network among organizational actors. Further, the superintendent, the director of audio-visual instruction, and a teacher with a longstanding interest in computers, played important linking roles. Despite the involvement of different groups of participants at different points in the decision process, they (especially the superintendent) were involved in all aspects, including attendance at every one of the meetings of the blue ribbon committee. Thus, while participation of other players shifted over time, as March's "garbage can model" asserts, there was significant continuity in the involvement of key actors, and

the administrative mechanisms themselves further carried information from actor to actor.

5. The Superintendent consciously used well-defined criteria to select and structure the sequence of administrative mechanisms for managing this issue. For example, he expressed the following rationale for using a blue ribbon committee to generate the initial recommendation on microcomputers.

> Typically, if we had this kind of problem we would go with a professional staff who should know more about these instructional matters than anyone else. In this particular case we didn't have anybody on our staff that had any expertise in this area. So we had to go somewhere else to get the expertise....You see, if we take our teachers, and they talk about reading to the Board, they have tremendous credibility. If we take that same staff and talk about computers, we don't have the credibility, so we had to find somebody with credibility. The nature of the thing dictated that we get this blue ribbon committee.

In future papers we plan to describe the superintendent's operative decision rules for structuring the issue management sequence in this and other specific issues. Our current working hypothesis is that a stable set of such rules exists in his cognitive structure and has been, in part, more broadly institutionalized within the administrative structure of the district as a whole. These structures, together with the set of administrative mechanisms, appear to embody the routines by which the Shady Grove School District is able to consider and bring about fundamental changes in its domain, such as the introduction of microcomputers, without fanfare.

The Issue in Broader Perspective

The directions of domain change--that is, the actual content of what should be changed--is also influenced by cognitive structure.

We now want to focus more closely on the superintendent as a key actor in developing the substantive side of the computer issue. We have stated that Samson had an initial commitment to bringing computers into the classroom, and have given some evidence of his ongoing efforts to accomplishing this goal. This part of the paper examines the nature of that commitment. More specifically, we draw upon documentary evidence to analyze:

1. the reasons why the superintendent supported the introduction of computer instruction in 1980,
2. the sources of that support from statements going back to 1965,
3. the way in which the superintendent's thinking changed as events unfolded in the years between 1965 and 1980.

The ultimate claim made in this analysis is that in the fifteen year process of bringing computers into the schools the superintendent held to a basic set of beliefs revolving around the nature of social change and the importance of individualized instruction. The expression of this central theme, and the computer's contribution to it, evolves over time, but continuity in the underlying framework is easily documented. The superintendent appears to have had, in short, an underlying set of beliefs that:

1. were strong enough to motivate fifteen years of interest in computers, and
2. were flexible enough to encompass major changes in the technical capability of computers, the opportunities available for bringing them into the district, and the district's capacity to respond.

This part of the paper examines these beliefs more closely and concludes by speculating that a long gestation period from initial interest in computers to their adoption in the curriculum may have had much to do with the routine way in which the computers issue was ultimately brought to fruition in 1980.

The Speech File and its Analysis

Analysis of the superintendent's interest in computers is primarily based on the speeches he delivered from 1965 to 1980, supplemented by one of the first interviews we conducted (in 1980) which focused on microcomputers. For this preliminary paper eight speeches have been analyzed in detail. The speeches were chosen from a file of 73 speeches available from the superintendent's office, a set which the superintendent feels is virtually complete. Unfortunately, the preponderance of available speeches, especially in full written rather than note form, are from the early to middle 1970's. Further, the speeches given in the later half of the 70's are increasingly preoccupied with the twin problem of finance and declining enrollment, rather than curriculum or educational philosophy.

The preliminary analysis which follows, therefore, draws primarily upon five speeches delivered between 1965 and 1976 and our own interviews, supplemented by analysis of the outlines of three speeches given to new faculty in the late 1970's. Three of the early speeches are clearly related--that is, there is a substantial overlap in text--which allows a direct assessment of changing emphasis and argument. Two of these three speeches, delivered in 1965 (210 lines),[3] 1969 (190 lines) and 1973 (458 lines), were delivered to unknown audiences. Two other

speeches delivered to parents (107 lines) and students (135 lines), were chosen to give additional insight into the superintendent's argument before identified audiences. The exact date of these speeches is unknown, but they are estimated to have been given in the early 1970's by the superintendent. The final set of speeches, delivered to new teachers in 1977, '78 and '80, is also highly interrelated. Each follows the same outline, and shows substantial overlap in content as well. Here again, departures from the format are taken as significant indicators of change in the superintendent's thinking and priorities.

Although detailed analysis of the other speeches in this file have not been completed, preliminary investigation leads us to believe that there is considerable consistency in content between the eight speeches used in the analysis and the total set. The superintendent's statement of a five point philosophy, in particular, is reiterated in well over half of the speeches he has given, with only one minor addition in the years from 1965 to 1980.

The primary method used for analyzing the superintendent's speeches involves coding each speech into an exhaustive list of causal claims and then combining claims into a "mental map" of connected concepts. The method was developed by Robert Axelrod, a political scientist. The method has been broadly applied. For example Axelrod and his associates have used it to analyze transcriptions of meetings held by a policy level committee in the British government, the writings of one of the signers of the declaration of independence, the recorded participation of a Middle East expert in a gaming exercise, and forced choice questionnaires. These studies indicate complete consistency in the maps

constructed. That is, despite the use of from 43 to 116 distinct assertions in the first three studies cited, in no case does the speaker assert connections which are inconsistent with previous claims (Axelrod, 1976: 229-230). In addition, the coding of these texts was accomplished with very good intercoder reliability: 96 percent agreement on the location of cause and effect and 97 percent agreement on the direction of the sign (Axelrod, 1976: 227). There is less agreement among coders on whether or not a causal claim has been made, as would be expected when coders are asked to infer causality to statements not grammatically stated in a causal form, but even here Axelrod reports an intercoder reliability of 80 percent in his own policy committee study (Axelrod, 1976: 85).

This study used a modified version of the coding manual by Wrightson, which appears as an appendix in Axelrod (1976). Statements are coded, where applicable, into one of nine categories, summarized in Table 1.

Table 1 about here

The clauses involved are then examined for equivalency, following rules specified in the code book, and combined into a map of connected statements. In some cases assertions not central to the analysis are combined or dropped.

For example, one of our interviews includes the following statements:

> ...this micro-computer that has become available because of space age technology...is impacting the home with the microwave oven; it's impacting the car with the little computer you punch in; it's all in the transportation industry; it's in the communication industry; it's on the desk of a lot of people that live in our town....And then the question is asked:

> why teach the kids? Well, because these are the kids that are going to be operating these things tomorrow. So I see this as an educational problem of making our students literate in this area. And I think this is going to be a basic skill of the 1980s.

This statement was initially coded[2] into the following set of claims.

space age technology	/+/	microcomputer availability
[availability of] microwave ovens	/m/	[use of] computers in [nature of] home [life]
microcomputer availability	/m/	[the way] cars [run]
microcomputer availability	/m/	[the nature of] transportation industry
microcomputer availability	/m/	[the nature of] communication industry
[widespread use of computer]	/+/	[today's] students operating computers tomorrow
[today's] students operating computers tomorrow	/+/	educational problem of making students literature in [computer] area
literacy in computer area	/=/	basic skill of 1980s.

Figure 1 shows the way in which these claims were subsequently condensed and incorporated into a larger mental map of statements involving change in society. Each of the five speeches analyzed in depth for this paper were similarly coded and expressed as mental maps of causal relationships.

Figure 1 about here

The Computer's Place in the Mental Map

The ideas expressed in Figure 1 were put forth by the superintendent as the major rationale for bringing computers into the schools in 1980.

He has expressed that notion that "computer literacy is going to be a basic skills of the 1980's" over and over in our discussion during the last year and a half. When we asked whether there were other things that the availability of computers would impact, however, we were also told:

> Well...the literacy would be the main thing with me. However, we've got a problem when you individualize instruction, when you try to have students working at their own pace in various areas. We have a problem for the teachers. That is, coming up with options for each one of these kids each day and charting their progress. If we could use the microcomputer to manage instruction, then that's going to help us solve that one.

The notion of computer managed instruction, which was the focus of the pilot project on computers in 1976, is thus still alive in 1980, though of secondary importance to the emphasis on computer literacy as a basic skill needed in the 1980s.

The question that we then set ourselves to answer, drawing upon the speech files, was how far back could we trace these two ideas in the writing/thinking of the superintendent. The answer, to our surprise, was back to the first speech in the file, delivered in 1965 while Samson was assistant superintendent in another district. This speech, "Education for the Future," focuses on two points which Samson still makes in 1980. The first point is that a changing society makes demands upon the school system to educate students for an unknown future; a future in which even the nature of work itself cannot be predicted. The second, and major, emphasis of the speech is that individualized instruction is a mode of education responsive both to the need for adaptive citizens in a changing society and to basic research on the way in which learning takes place.

Computers are mentioned directly in this speech only once, as necessary to schedule complicated programs which require varying class size and varying periods of class instruction. When the speech was rewritten, in 1969, this mention of computers is no longer in the text. But by 1973 a much more extensive revision and elaboration of Samson's ideas on individualized education includes the notion that

> ...Twenty five years from now home-educational centers (individual learning laboratories), containing computer access terminals, television and retrieval systems will replace many school's independent study areas.
>
> The schools of the more immediate future will provide an individual "turf" for each student. These spaces, which are part and parcel of the laboratories and materials centers, will be equipped with a variety of equipment for immediate student recall of information. A computer system which will provide the hardware potential for the retrieval system will also be used to assist and manage instruction. [Emphasis added]

The idea that the computer might be useful for helping teachers manage record keeping also can be found in the speech "Forward to the Basics" which was delivered to a parent group in the mid 1970s. Here, a handwritten insert suggests that finding "a management program to use in individualized instruction" will help realize the district's curriculum goals. Computer managed instruction is mentioned to teachers in 1977 with a handwritten afterthought indicating that computers could also more directly "assist" teachers. (Computer managed instruction uses the computer for record keeping. Computer assisted instruction provides programmed learning packages.) By 1978 "computer managed and assisted instruction" is listed as a program emphasis for the district. The new idea is that "computer technology" also will be stressed. By 1980 microcomputers themselves are listed.

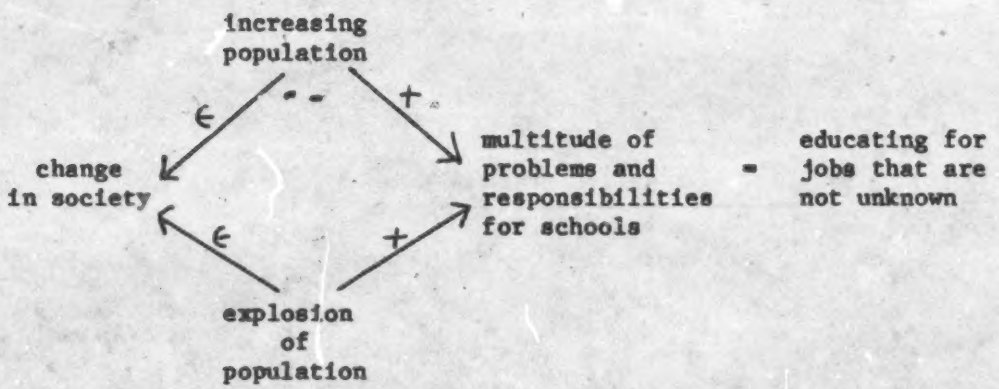
We thus can see the early idea that the computer is necessary to help schedule individualized instruction (expressed in 1965) augmented by the idea that the computer is more broadly useful to retrieve information. These ideas are later joined by the idea that computers can aid teacher record keeping and then by the idea that computers can present programmed instruction. The notion that computer literacy is important in and of itself arises in this first group of speeches between 1977 and 1978. By 1980 the need to "wrestle with computers" is in a list of challenges to the district, and microcomputers are mentioned specifically in the list of program emphases of the year.

Computer Literacy in Context

Two ideas from this first analysis of mental maps are particularly interesting to us at this time. The first observation involves the argument made in 1980 that the schools should help create computer literacy as one of the basic skills needed in the 1980's. The argument in 1980 took this form:

change in society $\leftarrow \in$ computer technology $\rightarrow +$ students operating computers tomorrow $\rightarrow +$ educational problem of trying to make students literate in the computer area

This argument is remarkably similar to the argument made in 1965:


increasing population
change in society
multitude of problems and responsibilities for schools
explosion of population
educating for jobs that are not unknown

What appears to have happened is that "space age [computer] technology" has come to be seen as having the impact to qualify it not just as a useful tool but as an instance of basic social change. The computer in 1980 has the same status as population shifts and the knowledge explosion did in 1965. Once this equation is made a whole chain of logic becomes available--a chain of logic that has been repeatedly expressed over fifteen years, a chain of logic that makes it necessary to educate for the jobs of the future.

The second thing that has caught our attention has to do with the richness of Sawyer's early thoughts on individual instruction, as expressed in Figure 2.

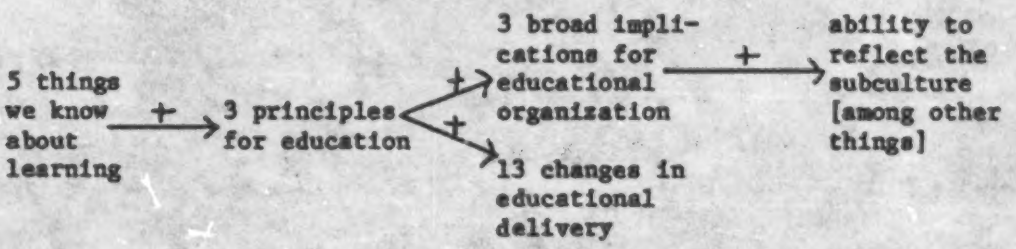
Figure 2 about here

Although we knew that "individualized instruction" was a central philosophical tenet of the district, we did not give it the attention we now think it deserves until beginning detailed analysis of the speech file. References to individualized instruction, such as those which appear in the '77, '78 and '80 speeches to new faculty (Table 2), can be seen as

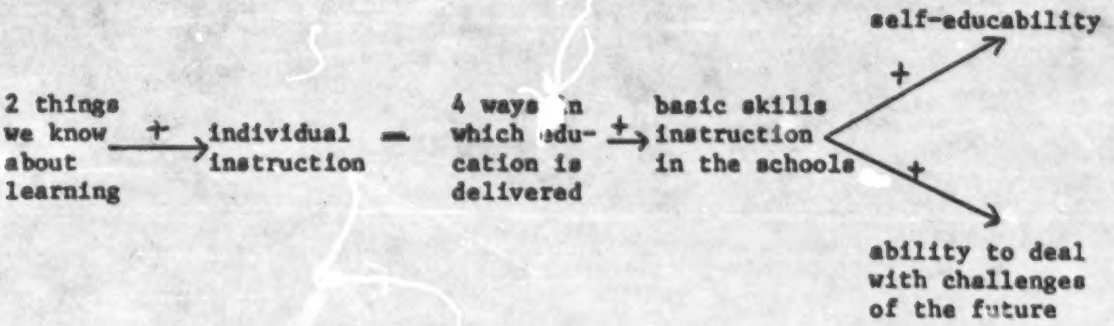
a kind of shorthand to the much more intricate set of ideas expressed in 1955, and then reworked in many later speeches, including the '69 and '73 speeches analyzed for this paper.

Table 2 about here

The 1969 speech, for example, rearranges and simplifies the causes and implications of individual instruction outlined in Figure 2 in the following form:



Similar fragments of the original chain of logic are found everywhere. For example, a truncated mental map from the speech "Forward to the Basics" takes this form.



By the 1977, '78 and '80 speeches to the faculty 2) even more abbreviated references are found, including the "5 things we know about

teaching" listed as part of the philosophy of the district, "reacting to changes in society" starred as a particularly important challenge facing the district, and "futurism" is one of the programmatic emphases for each year.

What has happened, we speculate, is that the superintendent directly expresses a less and less complete chain of logic through time. Certainly for himself, and probably for much of his audience, these ideas and their relationship are in place, they are taken-for-granted, they have become part of the "ground" against which newer ideas are placed, and out of which newer and now more potent ideas grow.

But newcomers such as ourselves do not have many clues to the past richness or the longevity of ideas expressed in phrases such as "individual education" or "futurism," if we work with current expression alone. More specifically, what going back into earlier writing has done for us is elevate the idea of individual instruction from decidedly secondary importance as deriving some spillover benefits from microcomputers to more primary importance as the link-pin in a chain of logic that made adaptability a primary educational goal and individualized education the means of promoting adaptability. Once knowledge of computers is identified as a specific example of future oriented adaptability, the link between the computer and the concept of individual instruction must be seen as direct rather than indirect. The superintendent's interest in computers (which we know from interviews began as a graduate student in the early 1960's) was given meaning by the many different ways he saw it supporting individual instruction through time. The interest in computers thus nourished by the needs of

individualized education then leap-frogged into prominence as a direct example of adaptability to the future identified as important in its own right. (At the same time the concept of individualized instruction lost potency as an evocative concept and the district now focuses on other, though not incompatible, organizing concepts.)

Conclusion

To some extent going back into the speech file provides evidence for the idea that major changes in organization are different from day to day operations. The notion of individual education, to which the need for computers was attached for many years, was clearly central to Samson's thinking. Further, as computer literacy began to have a life of its own, it too has prominence in his writing. The day to day details of the organization are not given such attention.

We speculate that this long period of attentiveness, however, is precisely what allowed the introduction of computers to be so smoothly managed. It is not just that members of the community, the faculty, and the administration were sensitized by the superintendent (as well as by the mass media) to the potential of computers. Continued attention to the same theme contributed to Samson's own ability to present computer education as a normal, natural, routine, part of the curriculum. In retrospect, the many speeches given by the superintendent, especially in the late 60s and early 70s, might be described as a series of rehearsals for the presentation made in 1979-80.

This point might well be underscored. For though it is possible and sometimes necessary to present major organizational changes as new and

dramatic, they will not become secure until they sink into the daily routine of the organization. The test of whether an attempted change will "take" is whether the change can in fact be expressed, sooner or later, as unexceptionable, as not requiring constant attention.

We are beginning to speculate, on the basis of observing other issues as well as the computer issue analyzed here, that the effectiveness of leaders such as Samson may well rest on their ability to in general not be dramatic in the work they do. Instead, they fold changing circumstances into an on-going fabric of sense-making which absorbs the events which might seem startling to newcomers or outsiders (Pondy, 1978).

The structure of meeting agendas, which repeatedly drop small, manageable, updates on the progress of activities such as those carried out by the blue ribbon committee on computers, appears to be a major way in which this is accomplished. Reminders and updates chew up into manageable pieces the impact of something like the introduction of computers. They gradually make a new concept familiar. Repeated references help other less centrally involved actors, such as the Board, see new activities in the district as non-startling.

While it well might be argued in the computer literacy issue that the twin conditions of "ambiguous or disputed objectives" and "unknown or poorly understood consequences of action" were not present to require a dramatic mode of presentation, and to elicit more uncertainty in outcome, we would respond that disparate objectives and various envisioned outcomes do characterize the development of the superintendent's thinking over the long term. Repeated but diverse attempts to link computers to central philosophical tenents in the district may have

helped generate an account which in the end helped keep this issue from being splintered in presentation. In addition, these conditions might well have been present in the immediate decision arena in the absence of a strong network of routinely functioning administrative mechanisms and a well articulated set of causal relationships.

To reverse the argument we made in our original proposal, and the argument that has held the center-stage in much recent writing about organizations, the well understood and well developed procedures which constitute administration within a given domain sooner or later must spillover into the administration of domain change. Perhaps we tend to miss this important facet of organizational decision-making as occasional visitors to the organizations we study, or as neophyte administrators occasionally thrust out of academics into academic administration. Even in situations which are treated more dramatically, it would be well to look for aspects of the routine.

Footnotes

[1]An earlier version of this paper was presented to the Special Interest Group on Organization Theory, American Educational Research Association meetings in Los Angeles, California. April 13, 1980. Support by the National Institute of Education, grant no. G-80-0152, and the research assistance of Bette Hughes is gratefully acknowledged.

[2]These and other strategies for managing data gathering and analysis will be further described in the final project report.

[3]Since spacing varies from speech to speech, the line has been adopted as the common unit of measure for all speeches that are not handwritten or in outline format. Any line with more than two words is included in the count, excluding titles and subtitles.

[4]For this preliminary analysis coding was done by two judges, who coded each document independently, and then agreed on a resolution of all differences.

References

Axelrod, Robert (ed.)
1976 Structure of Decision: The Cognitive Maps of Political Elites. Princeton, N.J.: Princeton University.

March, James G.
1980 "How We Talk and How We Act: Administrative Theory and Administrative Life," David D. Henry lecture on Administration, University of Illinois, Urbana, Illinois, September 25, 1980.

March, J. G., and J. Olsen
1976 Ambiguity and Choice in Organizations. Bergen, Norway: Universitetsforlaget.

Meyer, John, and Brian Rowan
1977 "Institutionalized Organizations: Formalized Structure as Myth and Ceremony," American Journal of Sociology, 30, 431-450.

Pondy, Louis
Leadership as a Lanaguage Game.

Sproull, Lee S.
1980 "Responding to Regulation: School Superintendents and the Federal Government," to appear in Organizational Analysis of Schools and School Districts, Samuel Bachrach (ed.), New York: Praeger.

Thompson, James D.
1967 Organizations in Action. New York: McGraw-Hill.

Weick, Karl
1979 The Social Psychology of Organizing, Second Edition. Reading, Mass.: Addison-Wesley.

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Symbol	Definition
/+/	politively affects
/-/	negatively affects
/+/	will not hurt, does not prevent, is not harmful
/0/	will not help, does not promote, is of no benefit to
/a/	may or may not be related to, affects indeterminably
/m/	effects in some non-zero way
/0/	does not matter for, has no effect on, has no relation to
/=/	is equivalent to, is defined as*
/ /	is an example of, is one member of*

*Categories not used by Axelrod.

Table 1: Coding Categories

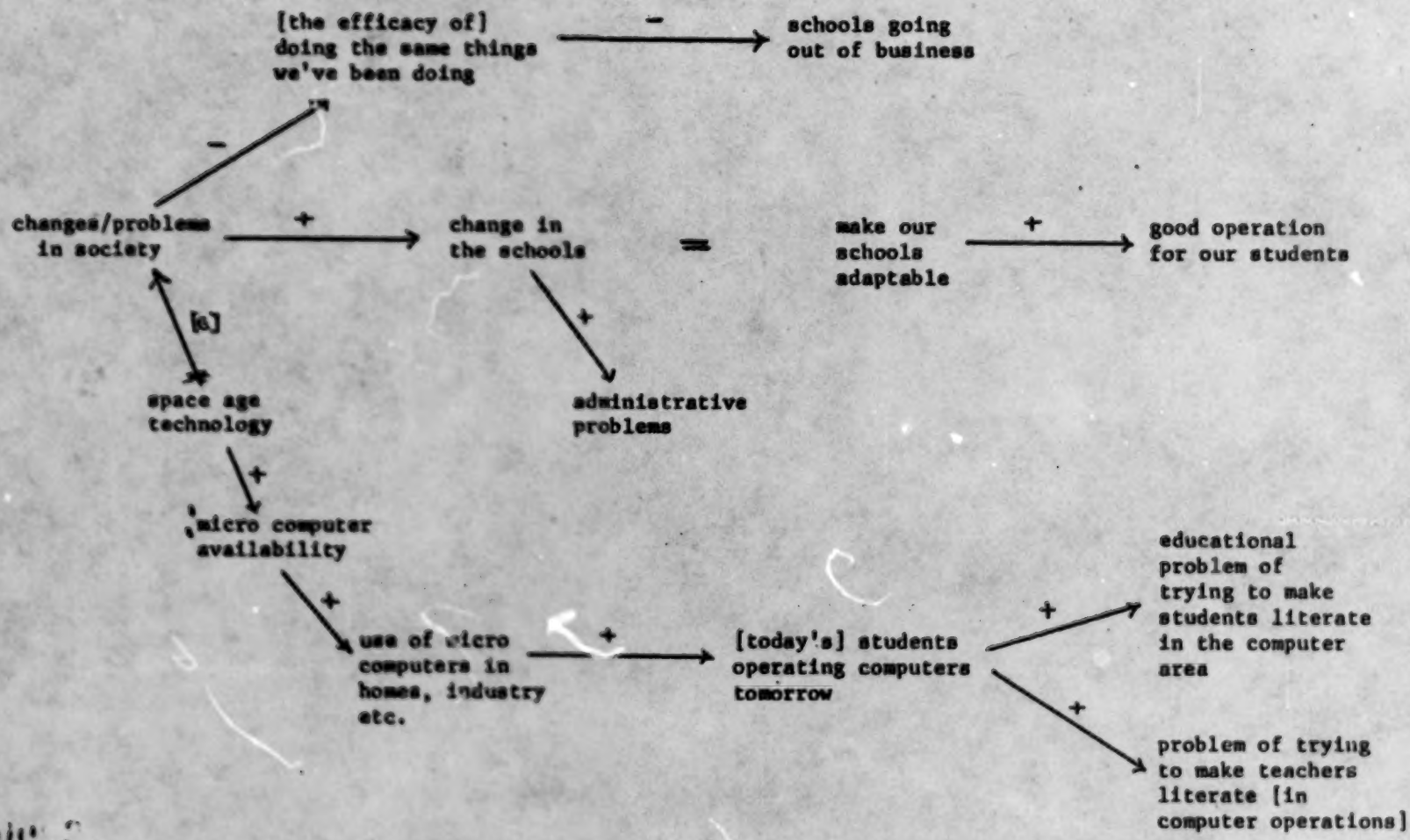
[the efficacy of] doing the same things we've been doing
schools going out of business
changes/problems in society
change in the schools
make our schools adaptable
good operation for our students
space age technology
administrative problems
micro computer availability
use of micro computers in homes, industry etc.
[today's] students operating computers tomorrow
educational problem of trying to make students literate in the computer area
problem of trying to make teachers literate [in computer operations]

Figure 1: Partial map of concepts involving the computer from 2/21/80 interview

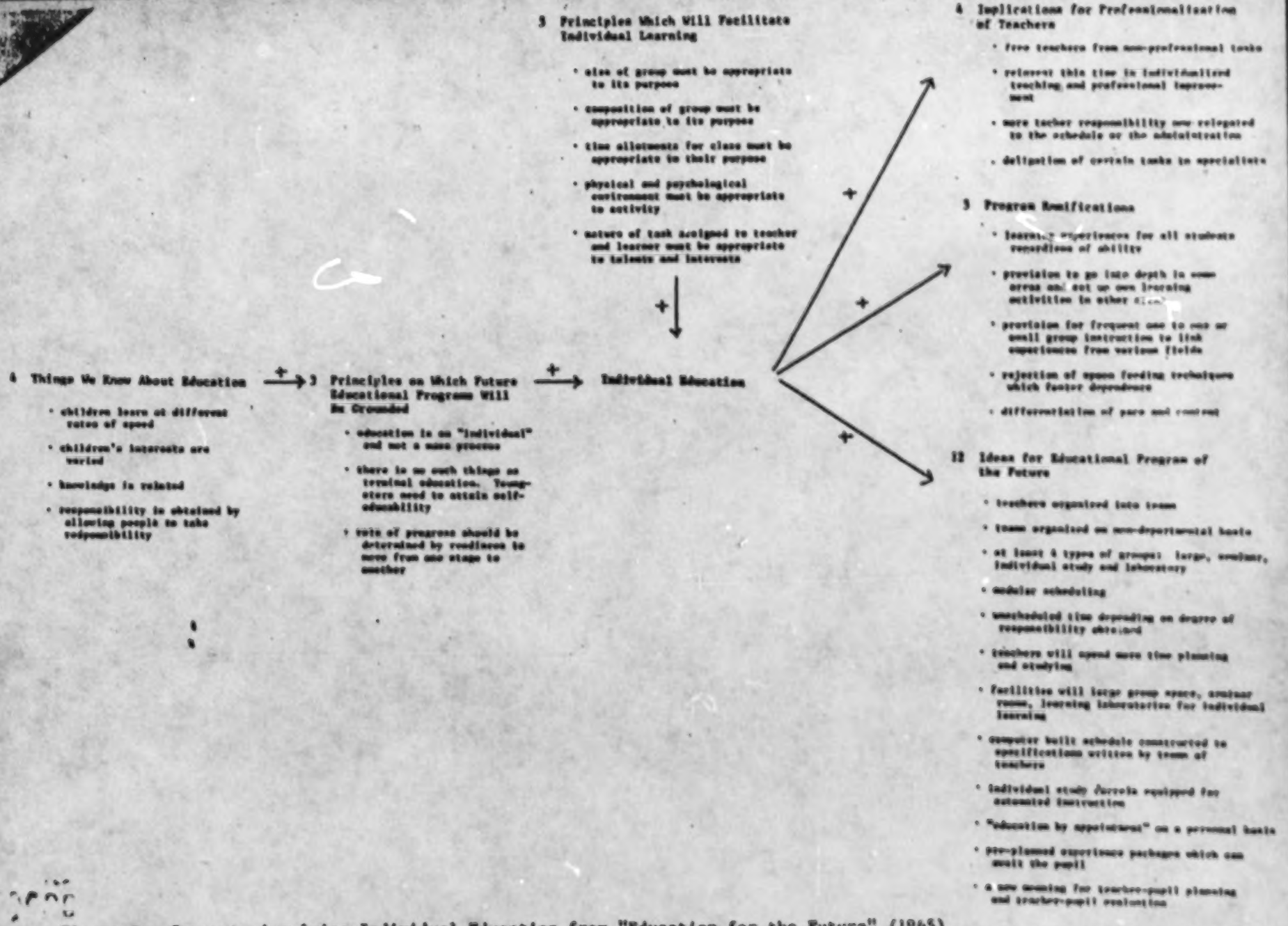
4 Things We Know About Education
• children learn at different rates of speed
• children's interests are varied
• knowledge is related
• responsibility is obtained by allowing people to take responsibility
3 Principles on Which Future Educational Programs Will Be Grounded
• education is an "individual" and not a mass process
• there is no such things as terminal education. Youngsters need to attain self-educability
• rate of progress should be determined by readiness to move from one stage to another
Individual Education
3 Principles Which Will Facilitate Individual Learning
• size of group must be appropriate to its purpose
• composition of group must be appropriate to its purpose
• time allotments for class must be appropriate to their purpose
• physical and psychological environment must be appropriate to activity
• nature of task assigned to teacher and learner must be appropriate to talents and interests
4 Implications for Professionalization of Teachers
• free teachers from non-professional tasks
• reinvest this time in individualized teaching and professional improvement
• more teacher responsibility now relegated to the schedule or the administration
• delegation of certain tasks to specialists
5 Program Ramifications
• learning experiences for all students regardless of ability
• provision to go into depth in some areas and set up own learning activities in other
• provision for frequent use to use of small group instruction to link experiences from various fields
• rejection of space feeding techniques which foster dependence
• differentiation of pace and content
12 Ideas for Educational Program of the Future
• teachers organized into teams
• teams organized on non-departmental basis
• at least 4 types of groups: large, seminar, individual study and laboratory
• modular scheduling
• unscheduled time depending on degree of responsibility obtained
• teachers will spend more time planning and studying
• facilities will large group space, seminar rooms, learning laboratories for individual learning
• computer built schedule constructed to specifications written by teams of teachers
• individual study carrels equipped for automated instruction
• "education by appointment" on a personal basis
• pre-planned experience packages which can await the pupil
• a new meaning for teacher-pupil planning and teacher-pupil evaluation

Figure 2: Concepts involving Individual Education from "Education for the Future" (1965)

	1977	1978	1980
CHALLENGES FACING DISTRICT	1. Finance 2. Facilities 3. Unit District Program 4. Negotiations *5. Reacting to "Changes in Societ	1. Finance 2. Facilities--closing schools 3. Program--basic subject areas 4. Negotiations ***5. Reacting to "Changes in Society	1. Finance 2. Continue to fill unused space 3. Learn to operate small schools effectively and efficiently 4. Maintain relations between community, staff, and administration 5. Individually wrestle with computers and the new systems ***6. Continue to react to "Changes in Society
EMPHASIS FOR CURRENT YEAR	Language Arts Writing Basic Skills Generally Art Curriculum Math (criterion referenced tests) Computer Managed Instruction (assisted also) Humanizing Education Futurism	Basic Skills Generally Writing Math Computation Competency Based Testing Computer Managed and Assisted Instruction and Computer Technology Humanizing Education Futurism	Basic Skills Generally Curriculum Development 5th Grade Math Gifted Computer Managed and Assisted Instruction Micro-Computers International Studies--Foreign Languages Education in Futures Writing Planning 1980 Forward

Table 2.: Challenges and Emphases Given to New Teachers 1977, 1978, 1980